Level -1 Test (ADC)

1. What are processes involved in ADC?
2. What is need for conversion of analog to digital?
3. What is quantization error?
4. What is resolution? Illustrate with pic.
5. State Nyquist theorem.
6. What is Sampling rate? What is the maximum sampling rate possible in pic16f877a.
7. What are the types of ADC? Advantages of SAR adc.
8. What is the acquisition time for a single bit conversion.
9. Draw the Circuit of Flash type & SAR type adc.
10. Which type of DAC used inside SAR?
11. Why holding circuit is used in ADC? Draw sampling and holding circuits.
12. Write some disadvantages of SAR.
13. What is the minimum current required for acquisition?
14. Can we run ADC during the sleep operation?
15. How many analog comparators available in PIC?
16. Write the formula to convert decimal value into temperature (if LM35 is used).
17. What is pcm and its process?
18. Formula to convert adc value into adc voltage(if pot used).
19. Draw SAR block diagrams
20. How many analog sensor can connect in pic16f877a and which port has adc channels.
21. What are adc register available in pic16f877a.
22. Write a adc conversion procedure.
23. How will you convert digital to analog GPIO and which register will use?
24. How will you get 10bit adc value and which register you used?
25. Write a simple program for adc conversion.